

Tank Main Gun Ammunition



MISSION

Provide the United States with world-class, direct-fire main armaments for use in ground combat weapons platforms.

DESCRIPTION AND SPECIFICATIONS

The 120mm family of tank ammunition is the most advanced and lethal tank ammunition in the world. Two types of ammunition are fired from the M256 cannon on the M1A1 and M1A2 Abrams tank: kinetic energy (KE) ammunition is used to defeat the heavy frontal armor of main battle tanks; multi-purpose (MP) ammunition is used against lightly-armored vehicles, helicopters, buildings, bunkers, and infantry.

KE lethality is optimized by firing a maximum-weight projectile at the greatest velocity possible. The 120mm series of KE ammunition (M829, M829A1, M829A2, and M829E3) use penetrators of increased mass and length, lighter sabots, and more powerful propulsion systems. Two key components of U.S. KE rounds: are depleted uranium (DU) penetrators that provide extremely dense material with excellent armor penetration capabilities, and aluminum or lightweight graphite composite sabots.

MP rounds use a high explosive, shaped-charge warhead to provide blast, armor penetration, and fragmentation effects. The M830A1's sub-caliber discarding sabot projectile gives it higher velocity, decreased drag, and increased accuracy over the M830 cartridge. Its proximity sensor provides anti-helicopter capability. The XM908 high-explosive obstacle-reduction cartridge reduces large concrete obstacles, buildings, bunkers, and light armors. It is identical to the M830A1 except that the proximity sensor is replaced with a steel nose. It is fielded to U.S. forces in Korea. The XM1002 MPAT Trainer will simulate the M830A1 MPAT configuration and ballistics.

Smart precision munitions enable precision strikes against high-value targets at extended ranges. The XM1007 Tank Extended Range Munition-Kinetic Energy (TERM-KE) is a soft-launch, rocket-boosted, terminally-guided, kinetic-energy munition. TERM will operate to extended ranges in line-of-sight and non-line-of-sight fire modes.

The **Long Range Kinetic Energy (LRKE) Trainer** will replicate tactical KE cartridges with long rod penetrators. The XM1028 Canister Cartridge will provide anti-personnel capability at short ranges. Currently, the LRKE and Canister Cartridges are unfunded requirements, but the PM Office is seeking funding to attain these capabilities.

FOREIGN COUNTERPART

NATO tanks employ KE and MP ammunition, but only France and the United Kingdom use DU penetrators. No NATO countries use tank ammunition with composite sabots or proximity switches. The XM1007 has no counterparts worldwide.

FOREIGN MILITARY SALES

M829: Kuwait, Saudi Arabia; M830: Kuwait, Egypt.

PROGRAM STATUS

- **M829, M829A1, M829A2, M830, M830A1, and XM908:** Fielded.
- **M829A2:** In production, completion of deliveries in 3QFY01.
- **M829E3:** In the engineering and manufacturing development (EMD) phase.
- **M830A1:** In production, completion of deliveries in 2QFY02.
- **XM908:** In production with delivery scheduled in 2QFY01.
- **XM1002 MPAT Trainer:** In the EMD phase.
- **XM1007 TERM-KE:** Concept exploration phase; Candidate for TERM science and technology objective.

PROJECTED ACTIVITIES

- **M829E3:** Commence M829E3 initial production in 1QFY02.
- **XM908:** Exercise option for 3,100 cartridges in 3QFY01.
- **XM1002:** Achieve type classification-low rate production in 3QFY03.
- **TERM:** Begin program definition risk reduction in 1QFY02.
- **XM1028:** Begin EMD in FY03.
- **LRKE:** Begin EMD in FY03.

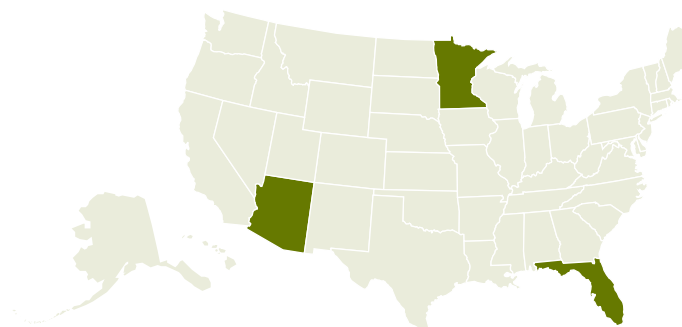
PRIME CONTRACTORS

M829A2 and XM908: Primex Technologies (St. Petersburg, FL)

M829E3, M830A1, and XM1002: Alliant Techsystems (Hopkins, MN)

XM1007: Alliant Techsystems (Clearwater, FL)

TERM: Alliant Techsystems (Hopkins, MN), Raytheon (Tucson, AZ)



* See appendix for list of subcontractors

